REMARKS

The Applicant has now had an opportunity to carefully consider the comments set forth in the Office Action that was mailed on May 28, 2009, which is believed to be the fifteenth (15) Office Action mailed in the subject application. <u>The withdrawal of the identification of allowable subject matter is noted with disappointment</u>. The rejection of the claims in light of yet another new set of cited documents is respectfully traversed. Re-examination and reconsideration are respectfully requested.

The Office Action

In the Office Action that was mailed May 28, 2009:

prosecution was reopened in light of new grounds of rejection;

claim 2 was rejected under 35 USC §102(e) as being anticipated by U.S. Patent No. 6,546,385 to Mao et al. ("Mao");

claim 6 was rejected under 35 USC §103(a) as being unpatentable over Mao in view of U.S. Patent No. 5,276,616 to Kuga et al. ("Kuga");

claim 7 was rejected under 35 USC §103(a) as being unpatentable over U.S. Patent Application Publication No. 2003/0156754 by Ouchi ("Ouchi"), however, this appears to be an error and it appears that the intention was to reject **claim 7** in light of a combination of Mao and Ouchi; and

claim 8 was rejected under 35 USC §103(a) as being unpatentable over Mao, Ouchi and U.S. Patent No. 6,002,798 to Palmer et al. ("Palmer").

The Present Application

Briefly, the present application is directed to systems and methods for automatic and semi-automatic document indexing of scanned documents. They are useful where a large document is scanned to generate an electronic version of the document. For example, a review of the document may indicate that chapter headings in the document are rendered in an 18-point font size at a location that is centered horizontally on a page and is two inches from the top of the page. In that case, **a first sub-section delimiter** may be defined as any text located two inches from the top of a page and rendered in 18-point font size. Subheadings in the exemplary document might occur anywhere on a

page but are rendered in a 16-point font size with underlined characters. Therefore, <u>a</u> <u>**second sub-section delimiter**</u> for the document might be defined as underlined 16-point text.

Once one or more sub-section delimiters are defined (e.g., by a document processor user), the electronic version of <u>the document is searched to find occurrences</u> <u>of text **corresponding to** the sub-section delimiters</u>. Information regarding each occurrence is used to create an index or table of contents for the document.

The Cited Documents

In stark contrast, the primary reference of the Office Action to Mao discusses a method and apparatus for indexing and searching content in a hardcopy document that uses a search assistant computing device with an index table stored in memory. **The index table is "created"** in memory **by scanning a 2-D barcode** from a hardcopy document **or alternatively by downloading indexing information from a web page** via the Internet (**ABSTRACT**).

As such, it is respectfully submitted that Mao does not anticipate a method operative to automatically **generate** an index for a document. Mao simply accesses an existing index.

Kuga allegedly discloses a system for creating an index of textural data. In the system, a dictionary stores sets of specialized words particular to a field of knowledge related to the textual data. An entry selecting module selects as index entries only those strings which match one of those specialized words and notes the locations of each occurrence of each index entry in the text. A printer outputs the selected index entries together with their occurrence positions (**ABSTRACT**).

Ouchi allegedly discusses a method and system for extracting a title from a document image. Allegedly, a title is determined from a document image of an unspecified format based upon likelihood of containing a title in each of minimal circumscribing rectangles. The likelihood is determined based upon information obtained during character recognition of the image contained in the minimal circumscribing rectangles (**ABSTRACT**).

Palmer allegedly discloses a method and apparatus for storing document images, for creating retrieval index by which the document images may be retrieved, and for displaying the retrieved document images. When a document image is obtained, the document image is subjected to rule-based block selection techniques whereby individual regions within the document region are identified, and types of regions are also identified, such as title-type regions, text-type regions, line art-type regions, halftone-type regions and color image-type regions. The identification is used to create <u>structural information</u> and both the document image and the structural information is stored. Allegedly, a word-based retrieval index is created based on title-type regions and/or text-type regions (**ABSTRACT**).

The Claims Are Not Anticipated

Claim 2 was rejected under 35 USC §102(e) as being anticipated by Mao.

In this regard, the Office is reminded that to anticipate a claim, the reference must teach every element of the claim. Moreover, "the identical invention must be shown in as complete detail as is contained in the…claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ 2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim. *In re Bond*, 910 F.2d 831, 15 USPQ 2d 1566 (Fed. Cir. 1990). (MPEP §2131)

Claim 2 recites a method operative to automatically generate an index for a document. It is noted that the Office Action does not even assert that Mao discloses a method operative to automatically generate an index for a document. Accordingly, the Office has not met its burden of presenting a *prima facie* case of anticipation and **claim 2** is not anticipated by Mao.

With regard to the first element recited in **claim 2** (determining a subsection delimiter definition including at least one delimiter characteristic), the Office Action appears to cite column 7, lines 10-16, of Mao.

However, the cited paragraph (beginning at line 6) indicates that the searching assistant of Mao can be utilized to assist a reader of a hard copy document to search efficiently the hard copy document via indexing information stored in the indexing tables 420 and the memory 412 [of the searching assistant 402]. <u>Accordingly, the cited portion</u>

is not directed toward <u>**generating** an index</u>. Instead, the cited portion discusses <u>using</u> an already existing index.

The cited paragraph goes on to indicate that at steps 702 and 704, the searching assistant verifies whether the user is requesting a manual entry for search words or query words to index into the document. If the user, at step 704, enters certain query words or search words for indexing, then at step 706 the searching assistant 402 accepts the query words from manual entry via the user input 422 and then at step 708, the searching assistant 402 searches with the searching engine 410 **to find the particular index entries in the index table** at step 708.

Again, clearly, <u>the cited portion is directed toward using an existing index</u> and **does not disclose steps or processes** associated with a method for **generating** an index.

Accordingly, Mao does not disclose the elements arranged as required by the claim and **claim 2** is not anticipated by Mao.

With regard to the recitation of scanning a printed version of the document to generate scan data and performing optical character recognition functions on the scan data to generate an electronic version of the document, the Office Action cites column 5, lines 38-41, of Mao.

However, the mere indication that a device may include an optical scanner and an optical character recognition module for optically scanning text and/or data elements from a hardcopy document **does not disclose or suggest** doing so as part of a method to automatically **generate** an index. Accordingly, again, Mao does not disclose the elements of **claim 2** arranged as required by the claim. Accordingly, **claim 2** is not anticipated by Mao.

With regard to the recitation in **claim 2** of searching the electronic version of the document for one of characters and objects corresponding to the defined subsection delimiter, the Office Action cites column 7, lines 16-17.

However, as indicated above, the cited portion discusses the searching assistant 402 searching with the search engine 410 to find the particular index entries **in the index table** 420. Accordingly, Mao does not disclose searching the electronic version of the document. The cited portion discusses <u>searching an already existing index</u>.

Accordingly, the Office has not met its burden of presenting a *prima facie* case of anticipation. Therefore, **claim 2** is not anticipated by Mao.

With regard to the recitation in **claim 2** of generating the index for the document with all found items corresponding to the subsection delimiter occurrence, the Office Action cites column 7, lines 18-21.

However, the cited portion recites --then, at step 710, the searching assistant 402 displays a result of the search to the user [i.e., the search of the index entries in the index table], at step 710, and then exits the searching operation at step 712.-- It is respectfully submitted that the Office recognizes that this display of search results from a search of an **already existing index** does not disclose or suggest **generating** an index for the document with found items corresponding to the subsection delimiter occurrences as recited in **claim 2**. Accordingly, the Office asserts that --such displaying action of the search "is considered" as generating an index for the document with all found items corresponding to the subsection delimiter occurrences because the invention displays a customized index geared toward a particular user--. Clearly, such search results are not an index. Clearly, such search results do not represent disclosure of **generating** an index. The display of search results are a display of entries in an existing index.

For at least the foregoing reasons, **claim 2** is not anticipated by Mao.

The Claims Are Not Obvious

Claim 6 was rejected under 35 USC §103(a) as being unpatentable over Mao in view of Kuga. In an effort to support this rejection, the Office Action simply asserts that Mao discloses displaying the created index and checking that the displayed index is correct without citation to any portion of Mao allegedly disclosing such subject matter. Accordingly, **the Office has not met its burden** of presenting a *prima facie* case of obviousness. Additionally, it is respectfully submitted that Mao **does not disclose or suggest** displaying an index. Moreover, it is respectfully submitted that Mao does not disclose or suggest checking that the displayed index is correct. Clarification and a clear citation to a portion of Mao allegedly making these disclosures is respectfully requested.

Additionally, the Office Action stipulates that Mao fails to disclose correcting the index.

In this regard, the Office Action relies on Kuga.

However, even if Kuga could be construed as disclosing correcting an index, **claim 6** depends from **claim 2** and is not anticipated and is not obvious for at least that reason. Additionally, the assertions of the Office Action that Mao discloses displaying an index and checking that the displayed index is correct are unsubstantiated and unsupported.

For at least the foregoing reasons, **claim 6** is not anticipated and is not obvious in light of Mao and Kuga.

Claim 7 was rejected under 35 USC §103(a) as being unpatentable over Mao and Ouchi.

However, in explaining this rejection, the Office Action ignores most of the recitation found in **claim 7**. For example, **claim 7** recites *inter alia*: a method operative to automatically generate an index for a document, the method comprising: determining a sub-section delimiter definition including at least one delimiter characteristic, wherein determining a sub-section delimiter definition comprises **<u>selecting</u> <u>an exemplary sub-section title</u>**, performing one of document recognition and optical character recognition <u>on the selected exemplary sub-section title</u> to determine at least one recognizxed property, and using the at least one recognized property <u>of the exemplary sub-section title</u> as a sub-section delimiter definition.

In regard to determining a sub-section delimiter definition, the Office Action cites column 7, lines 10-16, and characterizes the cited portion as "disclosing and determining a sub-section delimiter definition including at least one delimiter characteristics, wherein determining a sub-section delimiter comprises <u>a user indicating at least a text string</u>."

However, **claim 7** <u>doesn't recite a user indicating a text string</u>. **Claim 7** recites selecting an exemplary sub-section title and performing document recognition or optical recognition on the selected exemplary sub-section title.

Further in this regard, the Office Action stipulates that Mao fails to disclose the sub-section delimiter is a title and relies on Ouchi for this disclosure.

However, even in the assertions of the Office Action regarding Ouchi, <u>there is no</u> <u>assertion</u> that Ouchi discloses selecting an exemplary sub-section title, performing one of document recognition and optical character recognition on the selected exemplary sub-section title to determine at least one recognized property and using the at least one recognized property of the exemplary sub-section title as a sub-section delimiter definition. Instead, the Office Action merely asserts that Ouchi discloses extracting a title and that title extraction software is initiated by a user. Ouchi **does not disclose or** **suggest** using the title as a delimiter or using characteristics of a selected title as delimiter characteristics. Instead, the software of Ouchi searches for titles according to its own rules.

In any event, Mao does not disclose or suggest the other elements of **claim 7** for which it is relied. The Office Action asserts that Mao discloses searching the electronic version of the document for one or more of the characters and objects corresponding to the defined sub-section delimiter and cites column 7, lines 16-17, in this regard.

However, as indicated above, <u>the cited portion describes searching</u> **an already** **existing index** <u>and</u> **does not disclose or suggest** a method for generating an index that involves searching an electronic version of a document for characters or objects corresponding to a defined sub-section delimiter. The searching assistant of Mao displays the results of the search of the <u>already existing</u> index. The Office Action considers this generating an index. However, displaying found items in an index **does** **not disclose** <u>generating</u> an index from all found items corresponding to sub-section delimiter occurrences.

For at least the foregoing reasons, **claim 7** is not anticipated and is not obvious in light of Mao and Ouchi.

Additionally, there is no motivation in the art to combine subject matter from Ouchi with subject matter from Mao. The index of Mao is fully functional and requires no assistance from Ouchi. Accordingly, the only motivation to combine subject matter from Ouchi with subject matter from Mao is information gleaned only from the present application. Accordingly, the rejection of **claim 7** is based on **impermissible hindsight** reasoning.

For at least the foregoing additional reasons, **claim 7** is not anticipated and is not obvious in light of Mao and Ouchi.

Claim 8 was rejected under 35 USC §103(a) as being unpatentable in view of three documents including Mao, Ouchi and Palmer.

However, **claim 8** depends from **claim 7** and is not anticipated and is not obvious for at least that reason. Additionally, the Office Action stipulates that Mao as modified by Ouchi fails to disclose displaying a plurality of document pages on a user interface, selecting at least one demarcation point on at least one of the plurality of pages and using the at least one demarcation point as the defined sub-section delimiter. In other words, the Office Action stipulates that Mao and Ouchi fail to disclose the entire subject matter of **claim 8**. In this regard, the Office Action cites column 8, lines 9-10, and lines 25-45 of Palmer.

However, the cited portions are directed toward discussion of displaying documents or portions of documents and are completely unrelated to making a selection of a demarcation point on at least one of a plurality of displayed pages. Moreover, the cited portions of Palmer are completely unrelated to using the at least one demarcation point so selected as a defined sub-section delimiter for **generating** an index for a document as recited in **claim 7**. In this regard, the Office Action attempts to cast the discussion of an operator selecting an abstraction level at which a structural view is displayed as a designation of a demarcation point.

However, a demarcation point is a point and the demarcation point referred to in **claim 8** is on at least one of the plurality of pages. It is respectfully submitted that, even if the designation of various abstraction levels could be construed to be a demarcation point, Palmer **does not disclose** using the selected abstraction level as a sub-section delimiter to generate an index for a document with found items corresponding to occurrences of the sub-section delimiter.

For at least the foregoing reasons, **claim 8** is not anticipated and is not obvious in light of Mao, Ouchi and Palmer.

Furthermore, there is no motivation in the art to combine subject matter from Palmer with Mao and Ouchi. The motivation suggested by the Office Action is specious. The Office Action suggests a motivation for making the combination is --if the

user decides to change the display or section of the document to be displayed, the user can easily switch over to another section without modification to the program--.

However, Mao is not concerned with displaying a document. According to Mao, the document is in **hardcopy** form (e.g., Abstract, line 2, 5 and 13). The invention of Mao relates in general to methods for indexing and searching **hardcopy** documents, and more particularly, to a method and apparatus for electronically indexing data elements in a **hardcopy** book or document and thereby searching and locating a particular data element in the **hardcopy** book or document (column 1, lines 5-14). Accordingly, there is no motivation to modify Mao to change the display or section of a document to be displayed.

For at least the foregoing additional reasons, **claim 8** is not anticipated and is not obvious in light of Mao, Ouchi and Palmer.

Telephone Interview

In the interests of advancing this application to issue the Examiner is invited to telephone the undersigned to discuss the foregoing or any suggestions that the Examiner may have to place the case in condition for allowance.

CONCLUSION

Claims 2, 6, 7 and **8** remain in the application. For at least the foregoing reasons, the application is in condition for allowance. Accordingly, an early indication thereof is respectfully requested.

☒   Remaining Claims, as delineated below:

(1) FOR	(2) CLAIMS REMAINING AFTER AMENDMENT LESS HIGHEST NUMBER PREVIOUSLY PAID FOR		(3) NUMBER EXTRA
TOTAL CLAIMS	4	- 29 =	0
INDEPENDENT CLAIMS	2	- 8 =	0

☒   This is an authorization under 37 CFR 1.136(a)(3) to treat any concurrent or future reply, requiring a petition for extension of time, as incorporating a petition for the appropriate extension of time.

☒   The Commissioner is hereby authorized to charge any filing or prosecution fees which may be required, under 37 CFR 1.16, 1.17, and 1.21 (but not 1.18), or to credit any overpayment, to Deposit Account 24-0037.

In the event the Examiner considers personal contact advantageous to the disposition of this case, he/she is hereby authorized to call Thomas Tillander, at Telephone Number (216) 363-9000.

Respectfully submitted,

Fay Sharpe LLP

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